

Tutors' Pedagogical Knowledge and the Preparation of Pre-Service Visual Arts Teachers In Uganda: A Case Of Three Selected National Teachers' Colleges

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Abstract: Central to pre-service visual arts teachers' preparation in teacher colleges is the tutors' possession of effective pedagogical practices. Pedagogical practices for tutors included; planning to teach in visual arts, content knowledge in visual arts, teaching methods in visual arts, knowledge of the learners in visual arts and assessment in visual arts. The research was carried out in three National Teacher Colleges (NTCs) purposively selected from three regions in Uganda namely; Eastern, Central and South western Uganda. The participants were eight visual arts tutors who were purposively selected and forty five randomly sampled pre-service visual arts teachers. Findings showed that tutors knew the importance of developing pre-service visual arts teachers' pedagogical knowledge, but they were limited in its full implementation due to institutional and personal constraints. The institutional constraints included; inadequate teaching space, teaching resources, congested art-curriculum, and educational policies. Personal constraints included; tutors' college training and qualifications, limited content knowledge, and lack of professional development programs. The researcher recommended refresher courses for tutors, provision of adequate teaching space, teaching resources, reviewing of the art-curriculum and educational policies.

Key words: *Pedagogy, Pedagogical Content Knowledge, Visual Arts, Pre-service visual arts teachers.*

I. INTRODUCTION

Teaching is a multifaceted practice that requires the tutors to be in the know of what they are doing, because their practices contribute to the pre-service teachers' learning process. Research indicate that for tutors to effectively prepare pre-service visual arts teachers, they need to acquire particular knowledge, which include but not limited to mastery of subject knowledge, pedagogical knowledge, curriculum knowledge, knowledge of learners, context among others (Shulman, 1986/1987). Therefore, possession of effective pedagogical knowledge is key in the teaching and learning process. This research focuses on pedagogical knowledge tutors employ in the preparation of pre-service visual arts teachers in NTCs in Uganda. In this research, pedagogical knowledge refers to general knowledge of teaching and learning of a particular subject, in this case visual arts.

Teachers education programs are intended to equip pre-service visual arts teachers with pedagogical knowledge. Pedagogical knowledge is essentially acquired by pre-service visual arts teachers within the teacher colleges. Currently, Uganda has five government aided NTCs of which three are permitted to teach visual arts education. These national teacher colleges provide training leading to an award of a diploma in secondary education (DSE), which is the minimum required qualification for teaching in secondary schools in Uganda. The DSE curriculum by policy was supposed to prepare pre-service visual arts teachers who only teach at ordinary level ("O" level; this is senior one to senior four). Diploma in secondary education is a two year program and the pre-service teachers who are admitted to the DSE program, are the ones who have completed a Uganda advanced certificate of education (UACE). Teacher preparation in NTCs is carried out in two main departments. The department of foundation and curriculum. This is where pre-service visual arts teachers acquire knowledge of general pedagogy. The second department is in charge of content (for example; painting, drawing, sculpture, etc.) and it is commonly referred to as art education department. During teacher preparation, pre-service visual arts teachers are exposed to a DSE curriculum which was centrally designed and is monitored by Kyambogo University. The DSE curriculum includes disciplines like two dimensional art (2D-art) (graphic design and studio technology, painting and studio technology, drawing and studio technology-still-life, nature study and figure drawing.), three dimensional arts (3D-art) (sculpture and studio technology, and pottery and studio technology and multi-media crafts) and theory which include; principles and methods of teaching art, art history and art appreciation, and marketing (DSE, 2002). Besides, each course carries a phrase 'studio technology'

which implies the science and skills of using materials, and handling tools and equipment particular to a given area of study (DSE, 2002).

Particularly, pedagogical knowledge specific is acquired in the department of art education through the discipline of principles and methods of teaching art. Therefore, a fewtutors are left with the task of developing pre-service visual arts teachers' pedagogical knowledgein this learning area. Ideally though, it would have been that each of the visual arts tutors nurtures the development of pre-service visual arts teachers' pedagogical knowledge specific in his/her area of specialisation. However, this is not the case, tutors who are teaching other disciplines apart from the principles and methods of teaching art, pay less attention to the development of learners' pedagogical knowledge by not showing them the relationship between the content and the elements of pedagogical knowledge specific. By so doing, pre-service visual arts teachers' development of pedagogical knowledge in different areas is limited.

II. Tutors' pedagogical knowledge

Researchers describe the term pedagogical knowledge in a number of ways. For example; Shulman 1986/1987, describes pedagogical knowledge as deep knowledge about the processes of teaching and learning, practices or methods of teaching and learning, overall educational ends (purposes, values and aims). Pedagogical knowledge is also knowledge about students learning, how students construct knowledge and acquire skills, and how students develop habits of mind and positive dispositions towards learning (Abisamra, 2010).

As such pedagogical knowledge requires an understanding of cognitive, social and developmental theories of learning and how they apply to students in the classroom. In addition, pedagogical knowledge also includes; a) classroom management, b) lesson plan development and implementation, c) students evaluation, d) techniques or methods used in the classroom, e) the nature of the target audience, and f) strategies for evaluating students understanding (Abisamra, 2010; Hudson, 2007; Shulman, 1987). In this case therefore, it can probably be concluded that a tutor who has knowledge of pedagogy and knowledge of content can effectively teach and help students achieve the desired grades. Pedagogically powerful ways include; teaching strategies, lesson plan development and implementation, classroom management, and student assessment (Shulman, 1987). Pedagogically grounded teacher therefore, knows what to do, when to do it, where to do it, and with whom to do it (Ssegantebuka, 2017).

Hudson (2007) asserts that this is critical knowledge pre-service teachers acquire while in teacher college and further develop it in schools as they practice teaching. However, pre-service teachers cannot develop what they do not have, the strong foundation of acquiring desired pedagogical knowledge starts in teacher training colleges with knowledgeable tutors. If tutors have desired pedagogical knowledge, then they can guide pre-service teachers' practices that later develops into the needed pedagogical knowledge for their school teaching. Therefore, tutors' pedagogical knowledge is paramount when it comes to developing pre-service teachers' pedagogical practices in schools, where they go for employment. Based on the literature reviewed, pedagogical knowledge concentrates on classroom management; lesson plan development and implementation; students evaluation; techniques or methods used in the classroom; the nature of the target audience, and strategies for evaluating students understanding (Abisamra, 2010; Hudson, 2007; Shulman, 1987). However, in this paper I am limiting myself on planning to teach in visual arts, content knowledge in visual arts; teaching methods in visual arts, learners' developmental stages in visual arts and assessment in visual arts.

III. Review of related literature:Pedagogical knowledge

During teacher preparation, pre-service visual arts teachers are expected to acquire knowledge of planning to teach (for example: lesson plan, lesson objectives, lesson activities, presentation, teaching aids and classroom management). Knowledge of planning to teach, also makes reference to curriculum, syllabi and school timetables (Musingafi et al, 2015). Knowledgeable tutors are expected to possess the knowledge of planning to teach before they pass it to their pre-service visual arts teachers. It should be noted that these tutors can only pass on to the pre-service visual arts teachers the knowledge they have, were they have limited knowledge they tend to omit it (Nbina, 2012).

Tutors with knowledge of planning to teach can help their pre-service visual art teachers learn how to prepare for teaching (Tankersley, 2010). For example, they guide pre-service visual arts teachers through structuring different lessons. They help them understand that different lessons and disciplines require different preparations. Different lessons can be structured to suit different learning environment, age level, and method of delivery that is affordable at that moment and space.

Tutors' possession of content knowledge is critical in teacher preparation. It can also be used to measure learners' achievement levels in teaching and learning situations (Ball, Thames, & Phelps, 2008). Therefore, tutors' content knowledge is an area of concern and it cannot be underestimated in any effective teacher preparation. However, it is only tutors who are knowledgeable in content knowledge that can guide pre-service visual arts teachersthrough identifying and selecting appropriate content knowledge for a given lesson.

Knowledgeable tutors are also in position to facilitate pre-service visual arts teachers' content knowledge search, acquisition and implementation (Ssegantebuka, 2017).

The tutor's knowledge of the students, existing values and attitudes with rules and procedures, and understandings about specific students' needs and the wider socio-cultural contexts can be used to guide the pre-service teacher's development of classroom management (Hudson, 2004). Knowledge of students is important in a number of ways, one of which is to guide the tutor in selecting the content, teaching strategies and other resources necessary in teaching. Interestingly, the amount of knowledge of students a tutor should have is the same amount of knowledge a pre-service visual arts teachers requires for effective teaching, therefore, a tutor must be in position to transfer it to the learners. In this research, knowledge of learners' developmental stages includes; emotional growth, intellectual growth, social growth, creative, aesthetic and perceptual growth among others (Lowenfeld&Brittain, 1987).Although Lowenfeld and Brittain's (1987) study focuses on understanding children growth and development in visual arts education, experience has shown that many adults including pre-service teacher are still going through similar stages, especially those learners whose exposure to art is low or those who started art late. It is therefore, from this observation that the researcher argues that the tutors' possession of the knowledge of learners' developmental stages in visual arts is pertinent for two reasons; -it helps him/her to pass it on to the learner [the pre-service visual arts teacher] as well as employing the same knowledge to understand the pre-service visual arts teachers learning during their teacher preparation. In this case, the tutor has to understand the linkages between development, knowledge and learning to support all aspects of a student's learning and development (Chong &Cheah, 2009). Tutors' understanding of learners' developmental stages in visual arts aids in selecting and sequencing experiences for quality learning, since knowledge of cognitive and emotional development influences the acquisition of skills in all aspects of art education (NAEA, 1999).

The teaching methods in visual arts like any other practically oriented subjects include: project, group work, seminar, workshops, exhibition and critiquing among others (Ssegantebuka, 2017). Teaching requires that its practitioners clearly understand what should be done to bring about the most desirable learning in students and be highly proficient in the skills necessary to carry out these tasks. These skills and understanding make up teaching methods which include a sounding knowledge of the strategies and techniques available, the ability to interpret the subject matter, familiarity with the nature of the learners and understanding of learning theory and its application (Clark & Starr, 1986). Tutors who have this kind of knowledge are likely to foster quality teaching of art in NTCs and engage pre-service visual arts teachers in quality learning.

However, the teaching methods in Uganda, teachers are currently using in classes do not develop the ability to think, instill moral values, or promote social welfare. They instead are limited to reproducing facts on tests. One can argue that there are teaching methods teachers are likely to have been exposed to during their teacher preparation. Clark and Starr, (1986) suggest that teachers should adopt a variety of teaching methods, which reinforce better development of the higher mental processes and skills. These teaching methods should stress inquiry, self-expression, socratic teaching, individual coaching, student participation in their own learning, and personalized instruction (Clark & Starr, 1986). Besides, Clark and Starr, (1986) argues that, for any teaching to be successful, the teaching method used should be tailored for the specific teaching-learning situation. In each one of these situations teachers should strive for, what content to include, what procedures to use, how best to evaluate what the teacher has accomplished and how to repair any errors and omissions in the students' learning. It is most likely that visual arts tutors who are using these active methods are the ones who were exposed to them during their training.

Pedagogical knowledge includes assessment of teaching and learning process among others. Assessment can be defined as the systematic collection, review and use of information about educational programs to improve student learning (Swearingen, 2002). Mainly, assessment focuses on; what students know and are able to do, and what values they have when they graduate. Assessment is an ongoing process of setting high expectations for student learning. It measures progress toward established learning outcomes, provides a basis for reflection, discussion and gives feedback to improve school academic programs (Israel, 2005). However, in (visual) art education, assessment is mainly subjective rather than being objective, but, tutors are expected to develop expertise in assessment as part of their professional preparation. Their understanding of assessment in visual art education should be commensurate with their competencies in curriculum and instruction (NAEA, 1999). Assessments in visual arts include actual performances in the forms of created artworks, essays and critical responses, interpretations and evaluations of works of art. Tutors should learn to use multiple methods of assessment, formal and informal, formative and summative, and a range of assessment strategies such as portfolios, journals, class critiques and discussions (NAEA, 1999). Using multiple methods of assessment in Ugandan context is likely to improve teaching. Therefore, it was in the interest of the researcher to find out how tutors conduct assessment in visual arts education that brings effective learning in NTCs in Uganda.

The reviewed literature so far indicates the central importance of tutors' pedagogical knowledge in the preparation of pre-service visual arts teachers. This is supported by Cotner, (2010) who states that, "what art teachers say and how they say it, contributes to students' development of art skills, conceptual understandings of art, and dispositions toward art". Nasir and Osman, (2009) concluded by stating that, it is also critical for art tutors to understand a range of subjects they teach and acquire specific visual art knowledge and skills informed by relevant theoretical constructs and experience. Therefore, Nasir and Osman, (2009) and Cotner's (2010) assertions indicate the need to have desirable pedagogical knowledge since it leads to good teaching. Good teaching according to Nasir and Osman, (2009) involves mastery of art skills and knowledge, teacher personality, classroom management and practical knowledge.

According to Okanlawon and Akanni (2009) students' difficulty in learning in art is attributed to lack of Pedagogical content knowledge on the part of the art teachers. Pedagogical content knowledge is a teacher 'unique knowledge of how to create learning opportunities that makes particular content more comprehensible to others (Shulman, 1986, 1987). Okanlawon and Akanni (2009) argue that these learning opportunities may include, but are not limited to, metaphors, demonstrations, activities, and examples that are tailored to the needs of particular group of learners. For any successful teaching, as suggested by Sánchez and Tillotson (2008), included; the use of an empowering pedagogy, which values learners' prior knowledge, culture, heritage, and language. They argue that, academic success in the arts is as a result of a rigorous, sequential, comprehensive, coherent, and well-articulated program with consistency in approach across the school year and from grade span to grade span (Sánchez & Tillotson, 2008). These arguments raise the need to examine tutors' desirable Pedagogical content knowledge they employ in teacher preparation.

Pringle (2009) looks at art educators as seeking to equip learners with "tools for looking" and developing "strategies for interpretation". In this case, learners learn to engage with works of art in part through developing the necessary 'looking' skills. These skills learners develop include looking, questioning, reviewing and making meaning. Once learners develop these skills they become confident and acquire knowledge to enable them to interpret art themselves. At this level Pringle, (2009) concludes that learners adopt an approach to artworks, which allows them to move from recognition to analysis and encourages visual and intellectual interpretive processes to happen. During teacher preparation in the visual arts in NTCs in Uganda a few skills are mentioned. However, the above skills by Pringle, (2009) raised the need to examine tutors' prescribed pedagogical knowledge in relation to what they possess and employ in the pedagogy of visual arts education (VAE). Thus, the research question for this study is: What pedagogical knowledge do tutors employ in the preparation of pre-service visual arts teachers in NTCs in Uganda?

IV. Methodology of Research

4.1 General Background

The research was basically qualitative in nature. The qualitative approach was chosen because the study sought visual arts tutors and pre-service visual arts teachers' perceptions, feelings, attitudes and their personal interpretation of the pedagogical knowledge used in the preparation of pre-service visual arts teachers in NTCs. A descriptive and evaluative case study was adopted as an appropriate research design for it provided the design through which tutors' pedagogical knowledge in visual arts was examined.

4.2 Sample Selection

The research was carried out in three NTCs purposively selected from three regions in Uganda namely; Eastern, Central and South western Uganda. The participants were eight tutors who were purposively selected and forty five randomly sampled pre-service visual arts teachers.

4.3 Instrument and Procedures

Data were collected using interviews, focus group discussion, observations and document analysis. Interviews were the main instruments used with tutors in selected NTCs to solicit tutors' perspectives about the pedagogical knowledge in visual arts which influences their teaching and pre-service visual arts teachers' learning. During the focus group interviews, the researcher focused mainly on soliciting pre-service visual arts teachers' own perspectives about pedagogical knowledge acquisition in the teaching of visual arts in NTCs. Data collected using tutors' interviews were complemented with data from lecture observation, and document analysis.

4.4 Data Analysis

Analysis of data started during the process of data collection and it was done repetitively. Interview recordings were transcribed during fieldwork to allow the researcher to revisit participants for further information and clarity. Data was generally organized in categories to reflect the research objective. Themes were developed by identifying ideas that continuously transpired across the data (Miles & Huberman, 1994). The themes were

carefully examined to get the fine distinctions that explained the tutors' pedagogical knowledge in visual arts in NTCs in Uganda in relation to the pre-service visual arts teachers' learning.

V. Results of Research

The research focused on the pedagogical knowledge, tutors use in the preparation of pre-service visual arts teachers in NTCs. The main findings of the study in this section, are presented, analysed and interpreted according to the sub-headings derived from the conceptualising of the term pedagogical knowledge.

The analysis of tutors' pedagogical knowledge sets a stage upon which to assess what tutors know and can do that consequently results into pre-service visual arts teachers learning. Using interviews, the researcher collected data from eight tutors. The eight tutors came from the three teacher colleges that are located in three different regions of Uganda namely: Eastern, Central and South-Western region. The eight tutors who participated in this study were given pseudonyms as follows; tutor *Rakat, Najeba, Sakit, Badayo, Kakama, Biina, SakaandKolinso*. Before discussing the pedagogical knowledge tutors use in the preparation of pre-service visual arts teachers, it is ideal to discuss their background.

Tutors who participated in this research were asked to indicate their sex, age brackets, qualification, disciplines taught and teaching experience during their semi-structured interview schedule and their responses are summarised in table 1. The researcher's interest was to find out to what extent does sex, age, qualification, disciplines taught and teaching experience, influence tutors' pedagogical knowledge in the preparation of pre-service visual arts teachers.

Table 1.

Sex, approximate age, qualifications and teaching experiences of tutors who participated in the Study

Name	Sex	Approximate/age	Qualification	Teaching experience
Tutor Sakit	Male	55-59	DSE /BED	30 years
Tutor Badayo	Male	50-54	DSE/BED/MAFA	20 years
Tutor Kakama	Male	50-54	DSE /BED	14 years
Tutor Saka	Male	45-49	BAFA/MAED	20 years
Tutor Kolinso	Male	40-44	DSE /BED	3 years
Tutor Biina	Female	30-39	DSE/BED	2 years
Tutor Najeba	Female	25-29	BAFA/PGDE	2 years
Tutor Rakat	Female	25-29	BIFA	1 years

Source: tutors

The findings in this table 1 showed that the study sample was mainly male. The higher the age bracket the more years of teaching experience. For example, tutors who were between 45-59 years of age had a teaching experience ranging between 14-30 years of teaching. Five of the eight tutors had trained on a similar program like their pre-service visual arts teachers. This was diploma secondary education (DSE), before they upgraded to bachelors education (BED). Therefore, they are considered as generalist teachers. Three tutors trained as specialist visual artist, holding Bachelor's degree in fine arts (BAFA) and bachelor of industrial and fine arts (BIFA). The two tutors out of the three upgraded with a post graduate diploma in education and a master of arts with education respectively. There was only one tutor who did not have teacher education background, instead trained as a specialist artist with a bachelor of industrial and fine art (BIFA). Data from observation and interviews indicated a significant relationship between qualification and pedagogical knowledge and teaching experience and pedagogical knowledge. Their pedagogical practices were measured against the number of disciplines they were able to articulate, in terms of giving explicit instructions, showing understanding of theory in that discipline and having the ability to practically demonstrate to learners using particular materials. Like their pre-service visual arts teachers, many tutors trained as generalist teachers at college and other tutors trained as specialist artists training in only three disciplines. However, whether generalists or specialist teacher, both faced challenges of not having desired knowledge in all the eleven disciplines they teach to their students as the college policy demands. Some tutors had desired knowledge in two disciplines, while others had desired knowledge in only four disciplines. In this case, findings indicated that tutors with more years of teaching experience were more knowledgeable than those with fewer years of teaching experience.

5.1 Planning to Teach in Visual Arts

Tutors applauded the importance of planning to teach as it introduces pre-service visual arts teachers to a number of teacher resources including; a lesson plan, curriculum, syllabi, teaching aids, timetabling among others. Tutor Najeba stated that "pre-service visual arts teachers cannot go wrong, if they learn planning before going to teach". Tutors agreed that it was their obligation to take the pre-service visual arts teachers through the

process of planning to teach especially in a practically oriented subject like visual arts. Tutor Sakit said that it is important to plan for teaching in visual arts, because it helps you answer the “what, how, where, and why” or else you are likely to bore learners with the same themes that are not explained as to why they would study only those. It is therefore, crucial to show the connectedness of these resources (lesson plan, curriculum, syllabi, teaching aids, timetabling) the teacher consult during planning. Tutors agreed that it is appropriate for pre-service visual arts teachers to experience comprehensive planning for teaching in visual arts while still at college. If they do not experience it while at college where else are they going to find it? It is a common practice for teachers to do what they find it easy especially when they are not expecting any one to examine him or her. Much as tutors clearly articulated the importance of learning planning to teach, they were not doing it themselves. They gave reasons as follows: many tutors assumed that the general knowledge pre-service visual arts teachers receive from education department is enough for them to use in specific content. They believed that planning to teach, that is writing a lesson plan, consulting a syllabus are for the beginners. Tutor Badayo was quick to state that “I am not going to be examined why do I have to go through the hectic process of designing a lesson plan, scheme of work and other related teacher resources” tutor Najaba said “I am already a teacher, I know what to do when I stand before the class”. However, the above quotations contradicted with what they said earlier. It is a manifestation that tutors do not model for their pre-service visual arts teachers the pedagogical knowledge of planning to teach.

5.2 Content Knowledge in Visual Arts;

Another pedagogical knowledge element is content knowledge. Content knowledge in visual arts is grouped in three categories; two-dimensional arts (2D), three-dimensional arts (3D) and theory. Two-dimensional category includes; painting, drawing, graphic design, printmaking and textile decoration. The three-dimensional arts category includes; sculpture, pottery and multimedia. The theory category is inclusive of studio technology, history of art and art appreciation. During the interviews tutors mentioned that they prepare general teachers who are supposed to have knowledge of all the mentioned learning areas in visual arts. Tutors noted that it is upon to them to see that their pre-service visual arts teachers acquire the necessary content knowledge, well-articulated to the learners and clearly told different sources of this content knowledge. Since it is common practice for pre-service visual arts teachers to learn from their tutors, tutors have to ensure that the content they share with their learners is relevant. Although the pre-service visual arts teachers are trained as generalist teachers in National Teachers Colleges (NTCs) in Uganda, three of their tutors interviewed were specialist artists. Secondly, even their tutors who have ever trained as generalist teachers, because of repeatedly over the years teaching only one or two areas (disciplines), they find challenges teaching other learning areas. During interviews, tutors noted that they face challenges when it comes to teaching theory. Tutor Kakama stated that “where possible we omit the content we do not understand well”. “We also omit content whose art materials, tools and equipment we do not have”. Tutors further indicated that in many instances, they lack referential materials like textbooks. Tutor Sakit further said that “in case of history of art and art appreciation which is compulsory, we have nothing to do but reading from the textbook or notes we get from friends”. He also noted that when it comes to studio technology, they teach what they find easy “after all the curriculum does not stipulate the content for it”.

5.3. Teaching Methods in Visual Arts,

During the interviews, tutors mentioned the need to use active teaching methods. Tutor Saka noted that “our learners have a belief that since we are experienced tutors we have knowledge of a number of teaching methods that are effective in specific contexts. Therefore, they always rely on us to model for them these teaching methods as well as explaining to them the teaching method under use, why that very one and not the other and where else it can be used or it cannot be used. Indeed “we not only need to model for them the most effective teaching methods, but also to offer an opportunity for the pre-service visual arts teacher to experience these teaching methods before going to teach, and this should be done under our guidance”. Tutors also appreciated that it was their role to assist their pre-service visual arts teachers when selecting teaching methods that are affordable in a given context, responding to their needs and in conformance with the size of the classroom. Although tutors were aware of the active teaching methods (*Group discussions, Demonstration and Observations and Exhibition and Critiquing*), lecture method remained the basic and main medium for lecture delivery. Tutor Biina observed that “For me I use lecture method because it helps me cover a lot of work in a short time but tell my students to use active methods in secondary school”. Tutor Badayo stated: “Well the easiest teaching method I use is lecture methods, because I tend to hurry with the contents we want to cover, we have a lot of it”. Tutors indicated that they use a number of teaching methods. However, some teaching methods were more commonly used compared to others. They felt that they attempted to use a number of teaching methods but some of them were difficult to use and were time consuming. At the same time some teaching methods required bigger space and there must be enough materials to use. This meant that tutors’ failure to

practice active teaching methods denied pre-service visual arts teachers the opportunity to develop this important pedagogical knowledge, since their tutors have not been able to model for them.

5.4 Learners' Developmental Stages in Visual Arts

Tutors underscored the importance of knowledge of learners and their characteristics. Tutors also agreed that it is their role to inform their pre-service visual arts teachers that having knowledge of learners informs practice, tells what a learner can do and cannot do at a particular age. Tutor Saka stated that "knowing my pre-service visual arts teachers' abilities, helps me to design course works that will help them develop and make them love the subject but not to hate it because it is difficult". Tutors further stated that "understanding learners' developmental perspective guides them in selecting teaching strategies that can help their learners learn and develop further". Understanding student's background and experience is paramount in all areas of education including visual arts education. Knowledge of students helps tutors to design teaching methods that can promote students' self-respect, character and motivation. It reveals to the tutors what the learner can do at different stages. Student's background experience further helps tutors understand their learners' developmental stages in visual arts. It should be noted that the learner's developmental stages in visual arts, influences the acquisition of skills in all aspects of art education. During the interviews with college tutors, a number of approaches tutors use to understand student's background and experience were enumerated. However, the common approaches majority of the tutors use, included; administering practical assignments in art and inaugural talks to the freshmen and women. For example, tutor Kakama indicated that he uses practical assignments to get to know his students' prior knowledge. Yet tutor Kolino stated that; "through inaugural meeting I get to know their names, their former schools where they are coming from and then their performance in art, helps me know what my students know and can do". Although tutors clearly articulated a number of strategies they use to understand their pre-service visual arts teachers' background and experience, data from observation and focus group discussion did not reflect this kind of knowledge. As a result what tutors taught to pre-service visual arts teachers was determined by their knowledge, availability of resources, convenience and tutors' competence. This meant that pre-service visual arts teachers did not get the opportunity to learn in a sequential manner, from the known to unknown. Such practices affected pre-service visual arts teachers' skills acquisition as well as their teaching practices in secondary schools. Lack of formal strategies of understanding pre-service visual arts teachers' developmental stages, background experience, learning styles and learning preferences explained tutors' failure to adequately help their pre-service visual arts teachers learn in visual arts. It becomes worse in a Ugandan situation where there is a general lack of the required resource materials and limited time for training. Therefore, the researcher argues that, it is paramount that tutors understand learners and their learning. When tutors' understand the learners, both tutors' and learners understand teaching and learning.

5.5 Assessment in Visual Arts.

Tutors reiterated the importance of both formative and summative assessment in teaching and learning. Whether formative or summative assessment, each has its own contributions to pre-service visual arts teachers' learning. Assessment encourages learners to learn more, it also helps tutors to check on learners' progress, and it keeps pre-service visual arts teachers working so that they have some work to present. Assessment also encourages the learners to learn more so that they get good marks. Assessment in visual arts education encourages improvement and motivation on the side of the learners. They mentioned that it is upon them to explain it to the pre-service visual arts teachers. Tutors agreed that there are different types of assessment which they should model to pre-service visual arts teachers-for example; talking about art works (critiquing), writing about art works, and use of portfolio and awarding of marks all these can assist in the development of assessment techniques. Tutor Sakit and tutor Biina lauded its importance in VAE. For instance, tutor Sakit argued; "Assessment is important in visual arts education because it motivates learners to learn more" Yet tutor Biina claimed; "It is important to assess learners because you can know how they are performing..." The above comments indicated that tutors were aware of the importance of assessment in visual arts, whether summative or formative. However, from interviews tutors revealed that due to a number of issues they do not adequately exercise assessment practices as desired. Some of the issues that hindered their application of the desired assessment practices they mentioned included; limited space, college programs and lack of resources among others. It was noted that the way tutors understood and practiced assessment determined the frequency of assessing learners. For instance, assessment was commonly understood as an act of making a comment and assigning a mark were necessary. However, majority of the tutor respondents had different views from what pre-service visual arts teachers expected. For example, tutor Kakama stated; "Assessment is not always giving a mark. I think if a student displays work and I make comments this is also assessment". Formative assessment according to the discussion was by comments mainly. Tutors reported this practice in all the three teacher colleges visited. However, tutors' practices where seen denying pre-service visual arts teachers an opportunity to learn desired assessment strategies while still training as future teachers. When tutors do not practically demonstrate desired assessment strategies it becomes

difficult for their pre-service visual arts teachers to acquire visual arts assessment skills that are expected of them. This means that pre-service visual arts teachers will not acquire skills in assessing visual arts (VA), a situation that will make them incompetent teachers when deployed to teach in secondary schools.

VI. Discussion

The research question was designed in order to establish the pedagogical knowledge tutors possess in the process of preparing pre-service visual arts teachers. The data presented reveal that tutors have limited knowledge in a number of disciplines due to the nature of the curriculum whose content some of which they did not study during their training. Secondly, tutors lack professional development courses which would help to refresh their knowledge and skills in the teaching profession. Results also revealed that there are institutional constraints that determine tutors practices. In a way these institutional challenges affect tutors' full participation and pre-service visual arts teachers' knowledge acquisition in a number of disciplines.

Data in table 1. Revealed that there was a significant relationship between qualification and knowledge and teaching experience and knowledge. Tutor with high qualification and those with high experience were found knowledgeable in a number of visual arts disciplines compared to those tutors with less qualification and teaching experience. This finding is in agreement with Kalra&Baveja, (2010) who stated that the more classes the teacher attends the more knowledgeable he/she becomes. However, Tebenkana (2011) argued that teaching experience significantly affects ones knowledge but it does not improve one's practical skills in visual arts if he/she does not practically involve him/herself in producing artworks.

The research findings revealed that tutors had mixed feelings about planning to teach. Data showed that a big number of tutors were aware of the importance of planning to teach when they argued that planning to teach exposes teachers to a number of teaching resources including: lesson plan, scheme of work, curriculum, textbooks and timetables. They indicated that planning to teach improves teachers' presentations and selection of teaching aids, art materials, tools and equipment. There were pertinent observation that were in agreement with Kalyankolo (1985), who argues prior preparations for teaching help art teachers to organise their resources before going to classroom or art room to teach. However, it was noted that tutors were not adequately modelling desired pedagogical practices to pre-service visual arts teachers that would enforce the learning of planning to teach. Tutors mentioned that planning to teach which involves documents like lesson plan, scheme of work is for beginners and those under examination. Such a belief seem to contradict with Hudson (2013), who in his research about mentor teachers encourages the acquisition of pedagogical knowledge by mentors. Data further indicated that tutors do not practice pedagogical practices of planning to teach, when they argued that the general knowledge of planning to teach pre-service visual arts teachers are exposed to, is enough knowledge, they can use to plan for their specific teaching. This issue contradicts with Ssegantebuka (2017), who observed that each discipline has its own peculiar elements that should be put into consideration before going to teach. It is therefore, ideal for tutors to expose their learners to such peculiarities if they are to learn and graduate as effective teachers.

As earlier mentioned, content knowledge in visual arts has three categories; 2D, 3D and theory. The three categories are content loaded including; how tutors develop their pre-service visual arts teachers' visual perception, select common themes, develop vocabulary of art (elements of art and principles of design), teach history of art and art appreciation, deal with art making, understanding studio technology and art materials, tools and equipment. In this research, visual perception involves the ability to see and appreciate what you see. When one learns to see looks at everything in his/her environment as important and meaningful in life. Therefore, developing visual perception is at the center of learning art as stressed by CPDD, (2002). The study findings revealed that tutors had limited knowledge of the vocabulary of art (elements of art and principles of design), despite the fact that they serve as building blocks and guidelines in art making as mentioned by (Brommer&Kinne, 1995; Mittler, 1994). Data presented showed that majority of the tutors could not mention more than three elements and three principle of design, neither could they explicitly describe the ones they mentioned. There were many possible explanations for lack of in-depth treatment of elements of art and principles of design. One explanation was that elements of art and principles of design are embedded within 2D and 3D artworks as mere units. Elements of art and principles of design are not examined and tutors do not teach theory in which they would be part. Third, tutors had little theoretical knowledge of elements of art and principles of design. This implied that tutors' limited theoretical knowledge of elements of art and principles of design hindered their use in the teaching and learning in visual arts. Yet CPDD (2002) expressed the importance of acquiring knowledge of the vocabulary of art for it is used in talking and writing about artworks.

Besides, data showed a strong belief tutors had about the hierarchical nature of elements of art and principles of design. According to tutors who participated in this research, they argued that elements of art and principles of design differ in order of importance depending on a given discipline. Some are more important in a given discipline than others. However, this belief about the hierarchical nature of elements of art and principles of design, contradicts with Brommer and Kinne's, (1995) and Mittler's, (1994) arguments, that elements of art

and principles of design are interrelated and work in harmony to bring out a work of art. This finding is similar to Grauer (1998) observation that the way the subject is taught both in schools and at college shapes teachers' views or beliefs about the nature of the subject and ways the subject is taught.

Data showed that each discipline in 2D and 3D arts carried a phrase 'studio technology'. For example, the discipline of painting or sculpture in visual arts curriculum (VAC) was painting and studio technology or sculpture and studio technology. Studio technology in this study implied the science and skills of handling and using materials, tools and equipment particular to a given area of study (DSE, 2002). Much as a significant number of tutors were aware of the importance of studio technology, they had limited knowledge of studio technology. Data further indicated that studio technology was an area which had been inadequately handled by the tutors. Tutors argued that even the visual arts curriculum they use does not stipulate the content for studio technology. This was an issue that contradicted with Curriculum Development Council-CDC, (2007), which emphasises clarity in the learning areas of VAC for effective teaching and equal treatment. However, tutors requested for its isolation as an independent area of study, if they are to treat it as important. This explained as to why tutors ignored the theoretical aspect of VAE and instead concentrated on the practical part, a practice that affected pre-service visual arts teachers' interest towards theory during teacher preparation. Therefore, making reference to the study results, tutors theoretical knowledge was rated low in the preparation of visual arts teachers.

The research results showed that tutors had limited knowledge of history of art and art appreciation. Yet according to Katz et al, (1995) history of art and art appreciation inform learners about the social, cultural and context in which works of art were produced. Data revealed that a number of tutors find teaching history of art and art appreciation challenging due to their limited knowledge in the discipline this is as a result of their background training, the Eurocentric nature of history of art and art appreciation content with very little local content, and lack of referential materials that tutors would use in the teaching and learning of history of art and art appreciation as observed by Tebenkana (2011). Even the little local content of Africa and East Africa was not adequately covered due to lack of references including textbooks. Fourthly, the history of Ugandan art was not well incorporated in the discipline of history of art and art appreciation as observed by Sanyal, (2000). This finding agrees with Kisaire (*in interview, 2013*) who stated that Ugandan art history was not common to tutors and it was sparsely documented, and much of it was orally transmitted.

The findings indicated that in Uganda, history of art and art appreciation is one area of study. Yet according to Katz et al (1995) history of art is one learning area and art appreciation is another learning area. Such an arrangement brings clarity and equal attention to a given discipline as suggested by Curriculum Development Council-CDC, (2007). However, tutors revealed that during teaching and learning, art appreciation as a learning area is not separated from history of art. This is due to the structure of VAC as well as tutors' limited knowledge in the teaching of art appreciation. The finding implied that both tutors and pre-service visual arts teachers will not develop analytical and critical skills that would help them advance in the field of VA (Katz et al, 1995). Despite the fact that tutors poorly handle art history and art appreciation, they were able to state that art appreciation equips learners with skills to talk and write about artworks. Besides, tutors raised the need to separate art appreciation from history of art, in order to give each area adequate attention during teaching and learning. Therefore, the VAE program would be considered more effective if art appreciation is separated from history of art, because tutors will be compelled to develop the desire to acquire knowledge of art appreciation as a new discipline in visual arts program.

The study findings revealed that tutors' knowledge of the active teaching methods was limited. Data showed that pre-service visual arts teachers were often exposed to lecture method, talk and chalk and imitation. Yet Clark and Starr, (1986) argued that teachers should espouse a variety of teaching methods, which supports better development of the higher mental processes and skills. Besides, tutors revealed that the choice of the teaching method depended on the discipline. For instance, some tutors believed that lecture method was used when teaching history of art and art appreciation. Yet demonstration method was used when teaching practical disciplines. Tutors' beliefs about selection of teaching methods based on a particular discipline contradicted with Kalande, (2006) and Kalyankolo, (1985) who advocate for the use of active teaching methods regardless of the discipline. This means that the tutors' beliefs about the choice and use of the selected teaching methods is passed on and learnt by the pre-service visual arts teachers. This is supported by Cotner, (2010) who states that what art teachers say and how they say it, contribute to students' development of art skills, conceptual understandings of art, and dispositions toward art. Tutors also felt that active teaching methods were time consuming and required bigger spaces and enough materials for use. Therefore tutors did not model active teaching methods to their pre-service visual arts teachers. Findings also showed that tutor-centred teaching methods deny pre-service visual arts teachers chance to actively engage in discussions, critiquing, experiments and explorations which are a number of active methods they can learn from in visual arts. This implied that if tutors did not model active/learner-centered teaching methods, pre-service visual arts teachers were not going to be able to apply them in high school when deployed to teach.

Research findings indicated that tutors were aware of the importance of knowing their pre-service visual arts teachers background experience in the teaching and learning in visual arts. Tutors argued that it helps them to know pre-service visual arts teachers abilities, and attitude towards specific disciplines. Tutors acknowledged the fact that pre-service visual arts teachers come to college with differing background experiences in which they need assistance if they are to learn (UNESCO, 2004). Besides, to get to know the differing background experience, tutors have to gather information from the pre-service visual arts teachers before engaging them into learning as stressed by UNESCO, (2004). However, findings indicated that tutors considered the process of getting to know the pre-service visual arts teachers background experience as time consuming. Yet this is contrary to transformative theory whose tenet states that experience is the starting point in any one's effective learning (Mezirow, 1997). This implied that understanding and teaching from learners' background experience helps pre-service visual arts teachers to integrate their new experiences with their prior knowledge about the world as observed by Jonassen et al, (2003).

Data further revealed that tutors use inaugural meetings and administering practical assignments in order to understand pre-service visual arts teachers' background experiences. According to UNESCO, (2004), these are less effective methods of understanding pre-service visual arts teachers' background experiences. There are laid down principles of getting to understand pre-service visual arts teachers background experience, which include; finding out what students already Know, what they Would like to know and then what they have Learned(KWL), observation, recording, and brain storming. Therefore, tutors' failure to use the standardized principles of understanding pre-service visual arts teachers' background experience as suggested by UNESCO (2004), implied that they had limited knowledge of the processes of gathering this kind of information and how it could be incorporated in the preparation of pre-service visual arts teachers. Research findings showed that tutors had no formal way of knowing their pre-service visual arts teachers learning style, instead they used their experience. Yet literature suggests a number of strategies used to assess students' preferred style of learning as including; using learning style record, a questionnaire intended to enlist pre-service visual arts teachers' learning preferences, surveying and observing learners' multiple intelligences (UNESCO, 2004).Findings further revealed that tutors who participated in this research, lacked knowledge of the mentioned strategies. This lack of tutors' knowledge of learners' learning style affected tutors' teaching practices. Hence, denied learners the opportunity to effectively learn.

The study findings revealed that tutors had limited knowledge of a number of assessment strategies, much as assessment directs teaching and learning in any discipline. Data revealed that a big number of tutors were aware of the importance of assessment in visual arts when they argued that assessment motivates learners to learn, it keeps pre-service visual arts teachers working, it also helps the tutor to know his students' growth in visual arts and their achievement levels. This is in agreement with Sánchez and Tillotson, (2008) who observed that, the capacity of teachers, students, and parents to know how students are progressing is core to good instruction and assessment in the arts and is inherent to the artistic process. However, it was noted that tutors do not adequately model desired assessment practices to their pre-service visual arts teachers. They mentioned a number of issues that stop them from practicing ideal assessment strategies as including; limited space, college programs and limited resources among others. Data further indicated that tutors secretly assess learners' artworks and after which they keep the marks up to the end of the term when they process the course work marks together with the examinations mark and then display the total. Pre-service visual arts teachers argued that when their tutors do not practically demonstrate desired assessment strategies, it becomes difficult for them to acquire skills in assessing artworks in visual arts. This meant that pre-service visual arts teachers do not acquire skills in assessing visual arts, a situation that makes them incompetent teachers in the secondary schools were they get employment.

VII. CONCLUSION.

In this research, tutors elaborated the importance of developing pre-service visual arts teachers' pedagogical knowledge, before they are deployed to secondary schools to teaching. Tutors unanimously agreed that it was their obligation to facilitate their pre-service visual arts teachers' development of pedagogical knowledge while they are still in teacher colleges. However, tutors indicated that they were not doing enough in developing pre-service visual arts teachers' pedagogical knowledge. They gave a number of constraints that impeded their full participation in developing their pre-service visual arts teachers. The researcher then categorized these constraints into two major categories. These categories were; 1) personal and 2) institutional constraints. Whereby personal constraints included; limited knowledge of some of the disciplines, college training and qualifications, lack of practice in their areas of profession and lack of participation in professional development programs. The institutional constraints included; inadequate teaching space, teaching resources, congested art-curriculum, and educational policies.

As a way of addressing institutional and personal constraints, the researcher recommends annual workshops in which MOEST, college administration and college tutors meet to share ideas about how best they

can supervise and improve pre-service visual arts teacher preparation. Moreover, it would be obliging for the MOEST to institute into the educational system the professional development programs and seminars where visual arts tutors in all teacher colleges can share and acquire pedagogical knowledge. The researcher is hopeful that through these kinds of interaction among MOEST, college administration, tutors and pre-service visual arts teachers, pedagogical knowledge in visual arts teacher preparation could tremendously improve.

The administrators and curriculum developers should ensure that visual arts tutors are inducted in a number of visual arts disciplines where they exhibited limited knowledge. These disciplines where tutors exhibited limited knowledge included; studio technology [*theory of tools and materials used in art*], History of art, art appreciation, Visual language [*elements and principles of art*], Jewellery making and Wood/stone carving. In the same manner, Visual arts curriculum developers need to restructure the current VAC, in order to separate the elements of art and principles of design and studio technology from 2D and 3D where they are currently embedded. They should separate the discipline of art appreciation from history of art and also making human-figure drawing independent of drawing still-life and nature studies. The researcher therefore, recommends the separation of such disciplines for equal attention and as a way of enforcing the teaching in these liberated disciplines, they should be examined as independent papers. The researcher is of the view that once the separation is done, pre-service visual arts teachers will experience in-depth teaching and learning of visual arts. The isolation of the above said disciplines, will avail opportunity to tutors to carry out research and acquire the necessary content knowledge of these study areas and adequately handle them to the benefit of pre-service visual arts teachers. Visual arts teacher education would become more beneficial to the learners if sufficient teaching resources were provided to all pre-service visual arts teachers. For adequate training tutors and pre-service visual arts teachers believe that teachers colleges would provide adequate and basic teaching resources to all learners. Teaching resources would include; Library facilities, Information and Communication Technology [ICT], and computer laboratory, art materials, tools, and equipment, and textbooks.

Tutors need to model more interactive and learner-centered teaching methods to the learners. Pre-service visual arts teachers need to see from their tutors how to actively engage in discussions, experimentations and explorations and how to employ active teaching methods to large classes.

Teachers college administration should ensure that tutors for VAE are exposed to the laid down principles of getting to know learners' background experience and learning styles. Getting to know pre-service visual arts teachers' background experience and learning styles help tutors to understand the level at which the learner is and how he/she likes to learn as far as visual arts are concerned so that teaching and learning is designed based on learners abilities which improves learning in VA.

Tutors should model appropriate practices regarding assessment. Pre-service visual arts teachers need to observe from their tutors how a number of assessment strategies are effectively used, how to make constructive criticisms, how to design discipline-based assessment, and how to award marks in a creative based discipline. In addition to modeling appropriate assessment strategies, there is need for tutors to frequently involve pre-service visual arts teachers in peer to peer assessment as well as giving them meaningful feedback on their performance in visual art works.

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